

2. The dual flush toilet system according to claim 1, wherein said engaging means engages said flush valve with both vertical travels and rotations about a vertical axis.

3. The dual flush toilet system according to claim 1, wherein said engaging means comprises protrusion means and a groove member with a V-shaped groove recessed in said groove member, wherein said protrusion means is slidably engaged with said V-shaped groove.

4. The dual flush toilet system according to claim 1, further comprising limit means for limiting the vertical travel of said flush valve, wherein said limit means engages the interactions between said flush valve and a support.

5. The dual flush toilet system according to claim 4, wherein said limit means comprises a limit member, a stop member, and adjustable means for adjusting the vertical travel limit of said flush valve, wherein said stop member selectively engages with said limit member.

6. (currently amended) The dual flush toilet system according to claim 1, further comprising load means for selectively engaging and applying a downward force on said flush valve, wherein said load means engages said flush valve ~~with a support~~ through interactive actions with said flush valve.

7. (canceled)

8. (canceled)

9. The dual flush toilet system according to claim 1, further comprising load means attached to float means for selectively engaging and applying a downward force on said flush valve in a flush operation, wherein said load means engages said flush valve with float means for controlling the timing to push said flush valve downward to close said discharge opening.

10. The dual flush toilet system according to claim 9, wherein said load means comprises adjustable means for adjusting the timing to apply a downward load to said flush valve.

11. (currently amended) The dual flush toilet system according to claim 9, wherein said float means has a specific gravity smaller than the specific gravity of water and ~~generally moves responding to the rise and fall of the water level in said water tank.~~

12. (canceled)

13. (canceled)

14. (canceled)

15. A flush lever for activating a flush valve to perform dual flush operations for a dual flush toilet system having a water tank with a discharge opening on the bottom, a toilet bowl located below said water tank and connected to said water tank by said discharge opening, said flush lever comprising:

a handle located outside said water tank and connected with a first pivot through a hole on the upper portion of the wall of said water tank, for operating said flush valve;

a lever arm with a first end integrally connected with said first pivot and a second end connected with a second pivot, wherein said lever arm can rotate about said first pivot; and

an extension piece with an elongated body having a third end pivotally connected to said second pivot of said lever arm, wherein said extension piece can turn about said second pivot within a predetermined angle.

16. The flush lever according to claim 15, wherein said second end of said lever arm having a slot recessed at said second end open to the top surface and the end surface, wherein said extension piece has said third end slidably inserted into said slot and pivotally connected to said second pivot with the bottom surface of said extension piece against the inner bottom surface of said slot.

17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (canceled)

22. (canceled)

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31. (canceled)

32. (canceled)

33. (canceled)

34. (canceled)

35. (currently amended) The dual flush toilet system according to claim 9, wherein said float means generally moves responding to the rise and fall of the water level in said water tank.

36. (currently amended) The dual flush toilet system according to claim 9, wherein said float means has an air chamber.

37. (currently amended) The dual flush toilet system according to claim 9, wherein said float means is partially submerged in the water of said water tank.

38. (currently amended) A dual flush toilet system for selectively flushing solid waste or liquid waste, said dual flush toilet system comprising:

a water tank with a discharge opening on the bottom of said water tank for storing and receiving water;

a toilet bowl located below said water tank and connected to said water tank by said discharge opening;

a spud having an elongated upstanding body with a lower end secured on said discharge opening of said water tank;

a flush valve comprising a tubular element upstanding and extending above the water surface in said water tank and slidably engaged with said spud, a float chamber attached on the lower portion of said tubular element, and a ring attached at the upper portion of said tubular element;

load means for applying a downward force on said flush valve, wherein said load means engages said flush valve through interactive actions with said flush valve;
and

engaging means for selectively engaging said flush valve to perform a full flush operation or a partial flush operation to flush wastes in said toilet bowl.

39. (currently amended) The dual flush toilet system according to claim 38, wherein said engaging means comprises protrusion means and a groove member with a V-shaped groove recessed in said groove member, wherein said protrusion means is slidably engaged with said V-shaped groove.

40. (currently amended) A dual flush toilet system for selectively flushing solid waste or liquid waste, said dual flush toilet system comprising:

a water tank with a discharge opening on the bottom of said water tank for storing and receiving water;

a toilet bowl located below said water tank and connected to said water tank by said discharge opening;

a spud having an elongated upstanding body with a lower end secured on said discharge opening of said water tank;

a flush valve comprising a tubular element upstanding and extending above the water surface in said water tank and slidably engaged with said spud, a float chamber attached on the lower portion of said tubular element, and a ring attached at the upper portion of said tubular element;

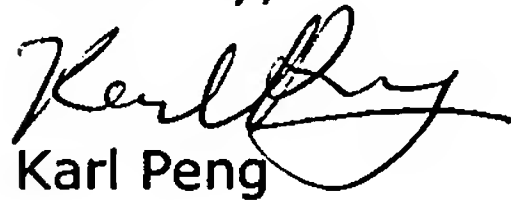
limit means for limiting the vertical travel of said flush valve, wherein said limit means engages the interactions between said flush valve and a support; and

engaging means for selectively engaging said flush valve to perform a full flush operation or a partial flush operation to flush wastes in said toilet bowl.

41. (currently amended) The dual flush toilet system according to claim 40, wherein said engaging means comprises protrusion means and a groove member with a V-shaped groove recessed in said groove member, wherein said protrusion means is slidably engaged with said V-shaped groove.

If you have any question regarding this patent, please let me know.

Sincerely,


Karl Peng

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